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" Gestion des insectes ravageurs des cultures et vecteurs de maladies pour un environnement viable et une sécurité alimentaire en Afrique: Développements courants"

"Insect pest and vector management for sustainable environment and food security in Africa: Current developments"

Programme

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Foraging insects encounter diverse array of microorganisms with potential benefits and risks in their habitats. For instance, termites encounter symbiotes and pathogenic fungi in their hemiedaphic habitats. An important question is how these insects distinguish between beneficial and risky fungi species. Our preliminary study showed that *Macrotermes michaelseni* detected an entomopathogenic isolate of *Metarhizium anisopliae* through olfaction and avoided direct physical contact. In addition, we found a differential response of the termites to the isolates of the fungus with different pathogenicity. We hypothesized that this avoidance behaviour reflects different composition of the volatiles emanating from the fungal strains. We collected volatile blends of different isolates and analyzed them by GC-MS analysis. Our results show that there are both qualitative and quantitative differences in these volatiles. We are currently characterizing the active repellent blend responsible for the avoidance behaviour of termites towards pathogenic fungi.

Keywords: Termites, Fungus, Interactions and entomopatho chemicals

A Comparative study on the life cycles of the leaf miners *Liriomyza trifolii* (Burgesss) and *Liriomyza sativae* (Blanchard) (Agromyzidae: Diptera).

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The life cycles of the leaf miners, *Liriomyza trifolii* (Burgess) and *Liriomyza sativae* (Blanchard), were studied in a growth chamber (Temp, 25 ± 1°C; R.H. 75 ± 5%; L/D 12 hL/12 hD and 3000 – 4000 LUX) at CIRAD, Montpellier, France. The host plant used was haricot bean, (*Phaseolus vulgaris)*. The egg incubation period of both species lasted for two days. Highly significant differences ($P<0.01$) were recorded between the number of feeding punctures caused by *L. trifolii* and *L. sativae.* Differences between the larval periods and number of emerging adults were not significant. Upon hatching, during 1996, the number of larvae of *L. trifolii* was significantly higher than that of *L. sativae,* but the total life span of *L. sativae* was significantly longer than that of *L. trifolii*.

Key words: life cycle, leaf miners, *Liriomyza*, Diptera

Six nouvelles espèces de psylles du genre *Pseudoeriopsylla* (Hemiptera, Homotomidae), ravageurs des figuiers au Cameroun.

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Les psylles sont des insectes piqueurs et suceurs de la sève des plantes hôtes. La famille des Homotomidae regroupe plusieurs sous familles et genres reconnaissables par les quelques caractères suivants : proctigère mâle bisegmenté, paire de tubercule prononcée sur le metapostnotum, plaque sous-génitale femelle dépourvue d'accessoires latéro-dorsales. La sous famille des Macrohomotominae regroupe les psylles dont les traits communs de caractères sont observables sur les ailes antérieures des adultes, avec notamment l'existence d'un ptérostigma et l'absence de la brisure costale. Parmi les 6 espèces de *Pseudoeriopsylla* africaines, une seule est connue du Cameroun, *P. laingi*. Les investigations entreprises à l'Ouest Cameroun de 2005 à 2008 ont permis de